



PUBLIC ENGAGEMENT WITH CLIMATE CHANGE:

THE ROLE OF EXTREME WEATHER EVENTS

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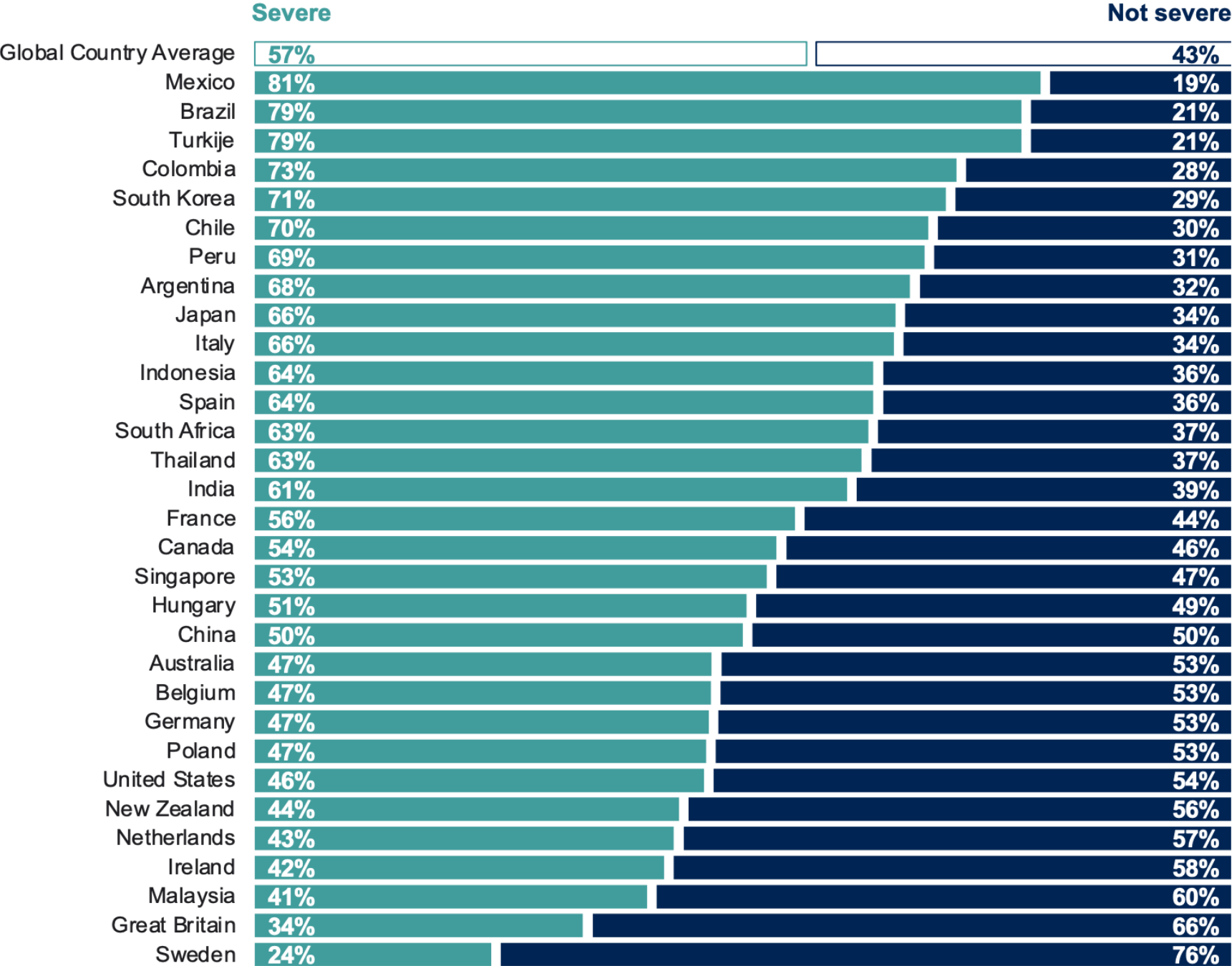


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Extreme weather events
increasingly experienced –
more severe in Global South

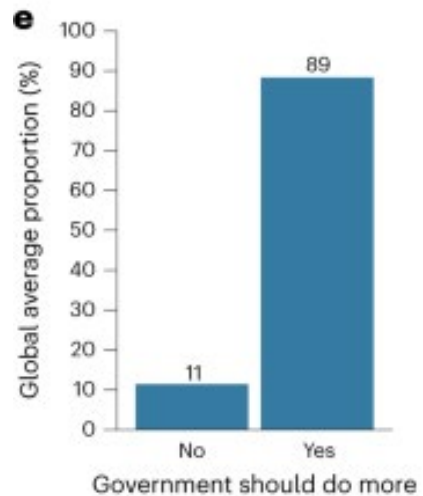
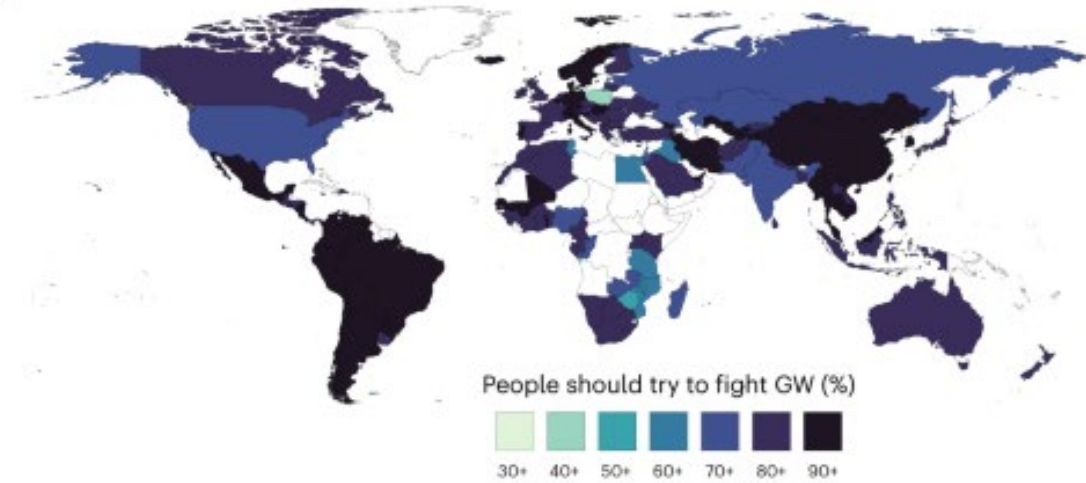
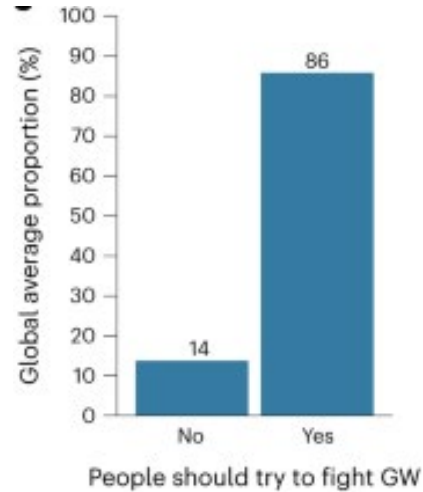


How severe an effect has climate change had so far in the area where you live? (Ipsos, 2024)



People are worried

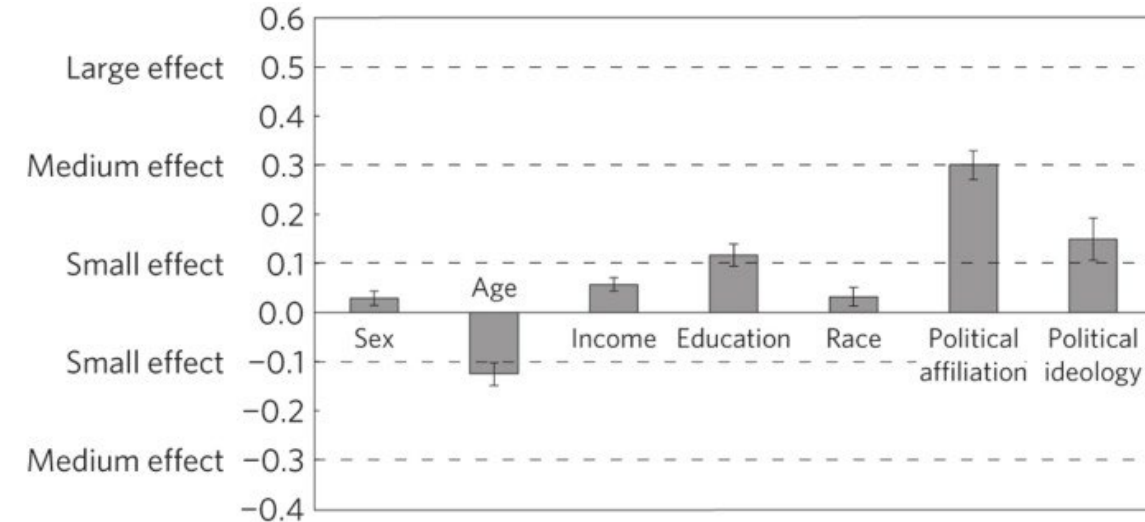
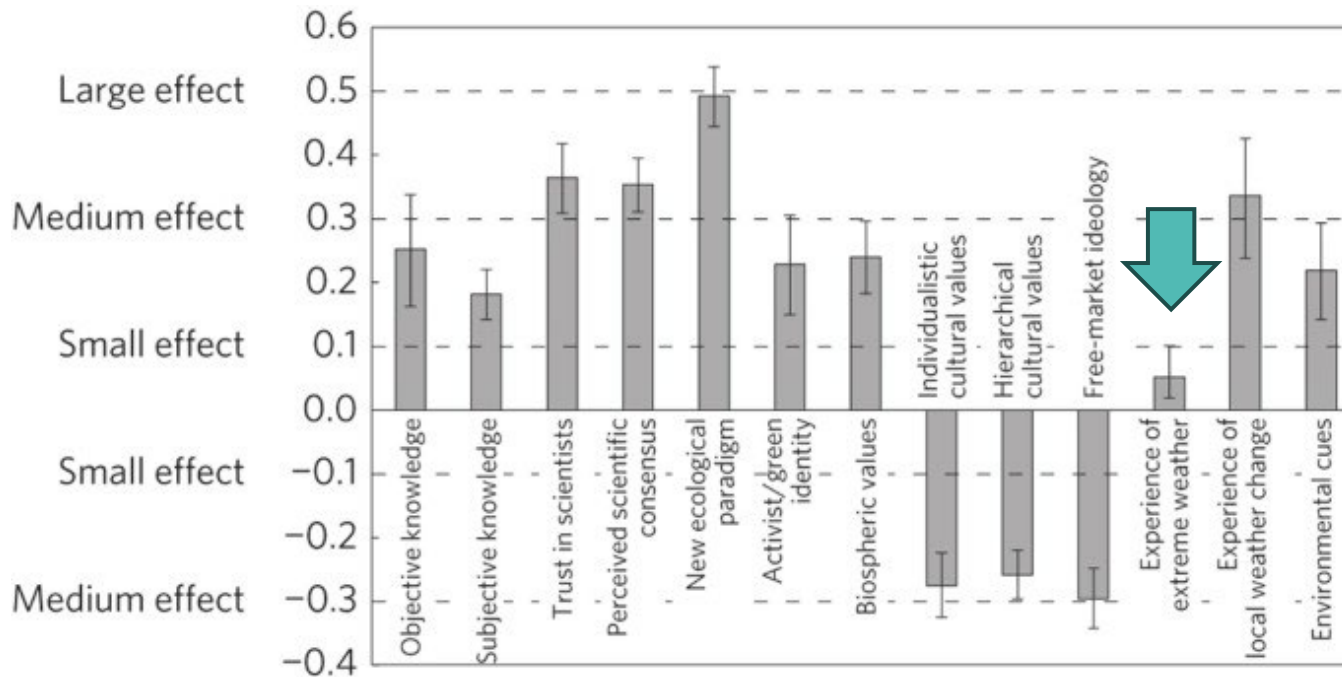
- 86% think we should fight climate change
- 89% say their government is not doing enough



Does experiencing extreme weather matter?



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“There is now a critical mass of studies to gauge whether there is a more general link between climate change belief and experience of extreme weather events.

*Although significant, the relationship is **negligible in size**”*

(Hornsey et al., 2016)

Does experiencing extreme weather matter?

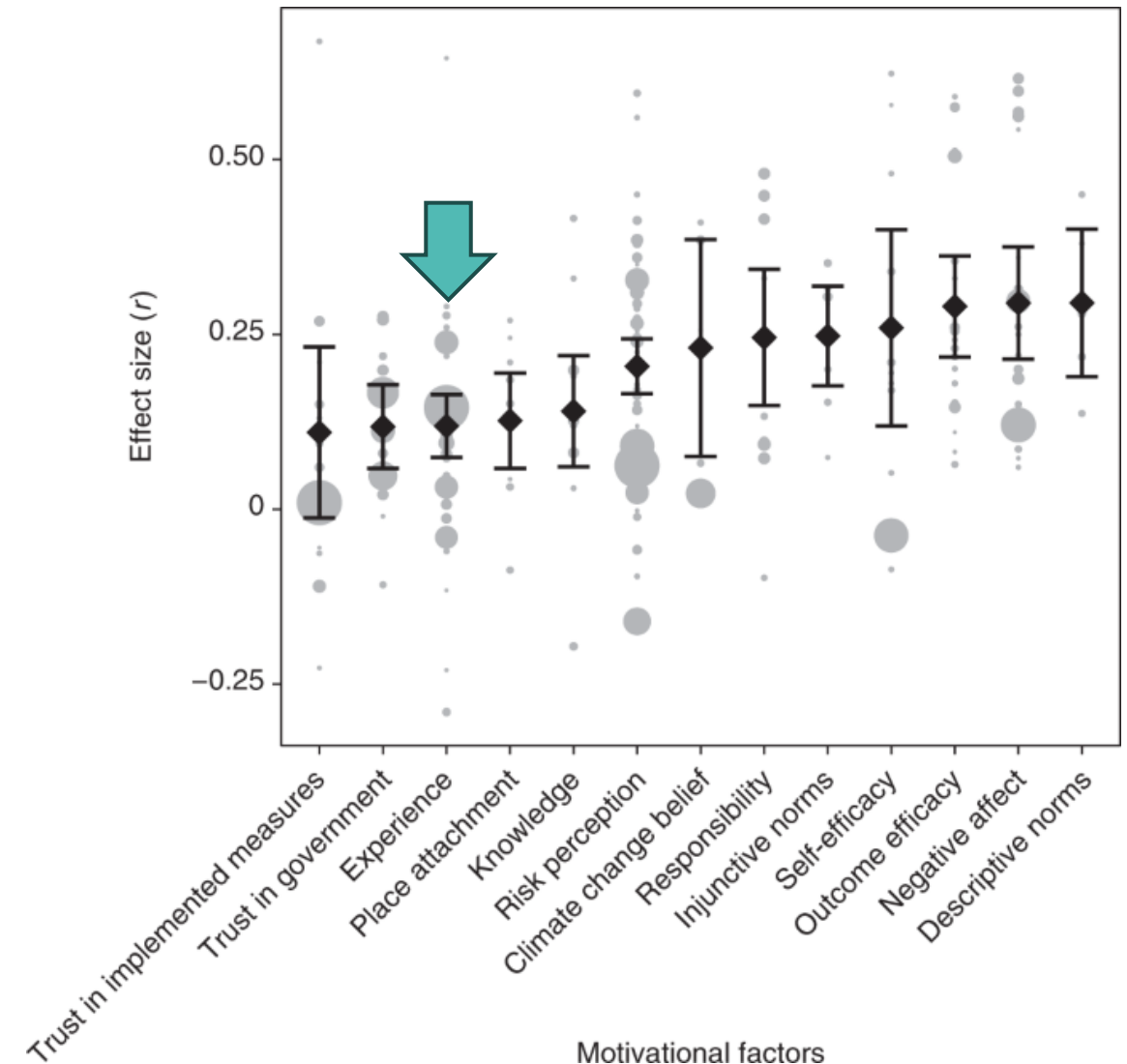


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What about climate **adaptation** behaviour?

*“Descriptive norms, negative affect, perceived self-efficacy and outcome efficacy of adaptive actions were most strongly associated with adaptive behaviour. In contrast, **knowledge and experience**, which are often assumed to be key barriers to adaptation, were relatively **weakly related to adaptation**”*

(Van Valkengoed & Steg., 2019)



Does experiencing extreme weather matter?



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Del Ponte et al (2025)

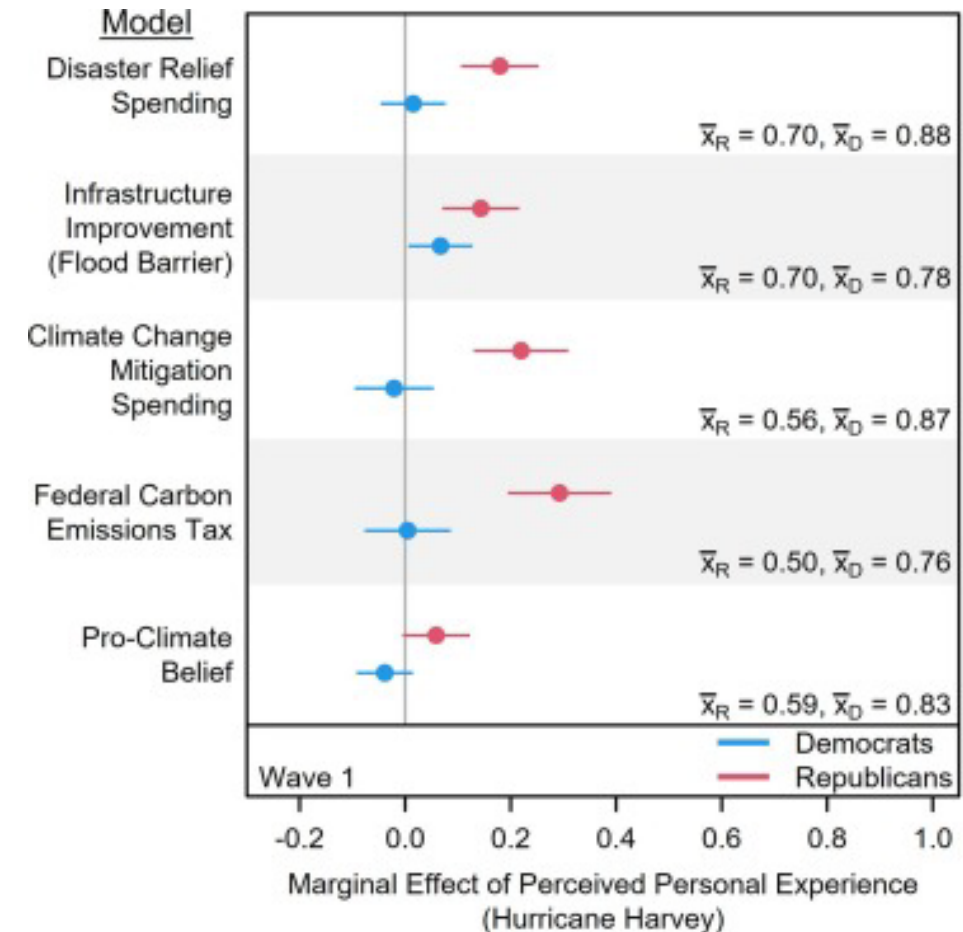
- Florida hurricanes: direct experience increases climate concern in **all voter groups** by 1% ($p < .01$).
- This compares to 62% higher concern amongst Democrats than Republicans ($p < .001$).

Chen et al. (2024)

- Hurricane Harvey & 2021 Texas winter storms: personal experience **reduces partisan divide** in climate beliefs and policy support
- But no effect of scientific information **attributing** extreme weather events to climate change

Ettinger et al. (2024)

- Australian bushfire impacts on adults already taking climate action: 45% increased activism; 39% maintained same activism level; and 15% decreased activism.



Chen et al., 2024

Climate beliefs have little effect on action



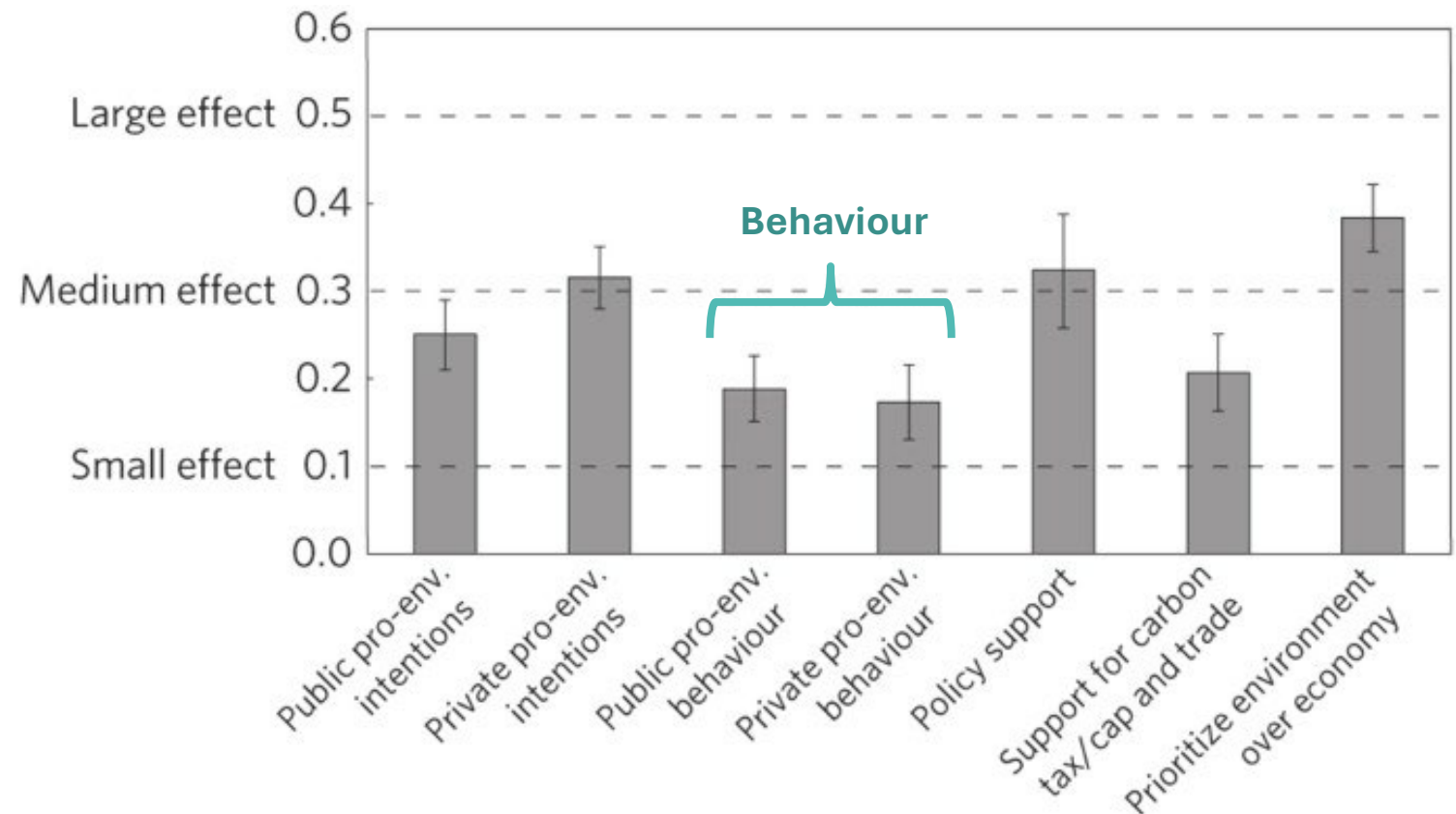
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Income (and e.g. geography) main predictor of carbon footprint; climate attitudes minimal effect

Example (flying):

- Personal income explains about **18%** of variance in flying behaviour, whereas **concern about climate change explains less than 1%** (More in Common, 2023)

Climate beliefs have more effect on **policy support** than on behaviour



What works to change behaviour?



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Downstream – influencing individuals' choices

- information / advertising (e.g. labels)
- education
- social approaches

2-3%
effective*

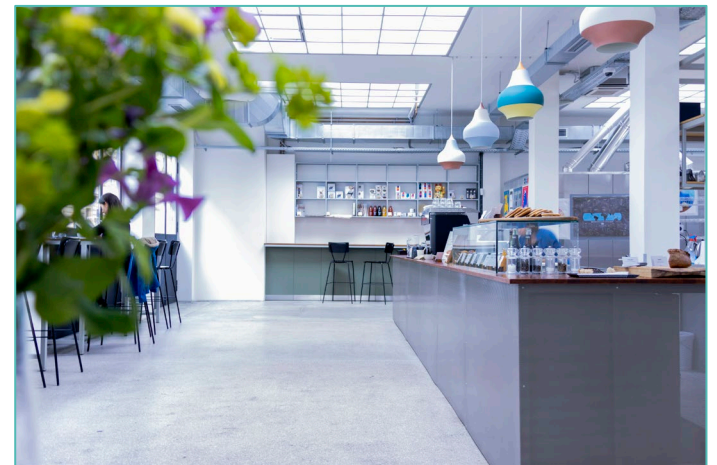
***But more effective for political / social change** (Weiss & Tschirhart, 1994)



Upstream – influencing context/situation of action

- economic measures
- changes to available products and services (nudges, regulation)
- changes to built environment

Up to 100%
effective



The limits of information...

Climate experts fly more often than other scientists

Ben Webster, Environment Editor

Tuesday October 20 2020, 12.01am,
The Times



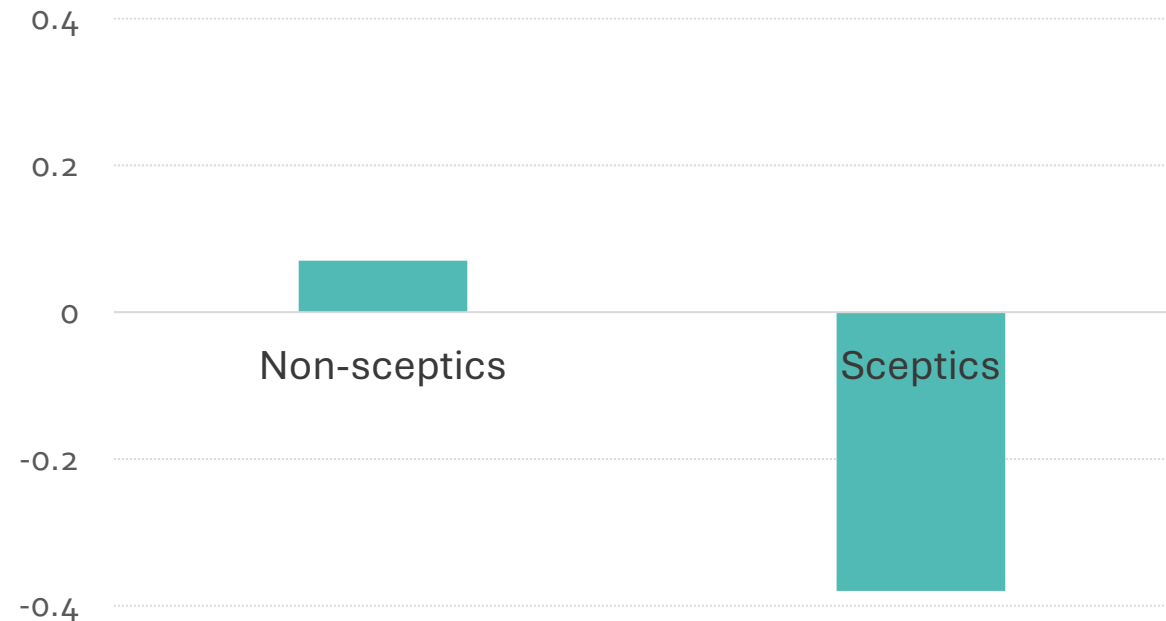
- Climate change experts took median **2-3 flights** per year; non-experts took **two** flights per year
- Both groups took similar no. of personal flights (1-2 per year)
- Climate change professors fly the most!
- **Knowledge doesn't lead to behaviour change**



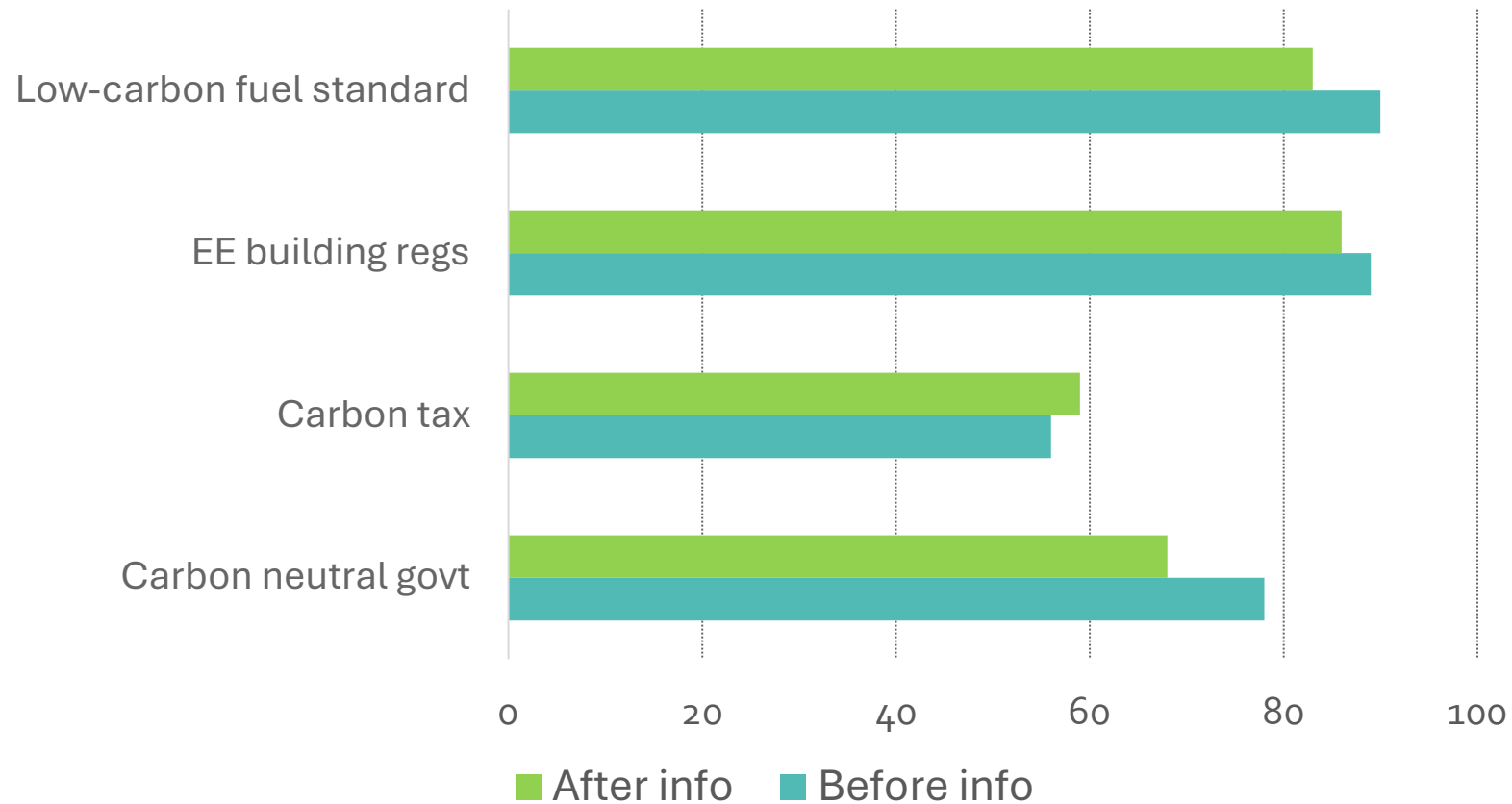
Information can polarise opinion...

We gave a group of people (some climate sceptics and some not) two newspaper editorials on climate change (one sceptical, one advocating action) to read and then asked:

*“Did you become **more** or less **convinced** about **climate change**?”*



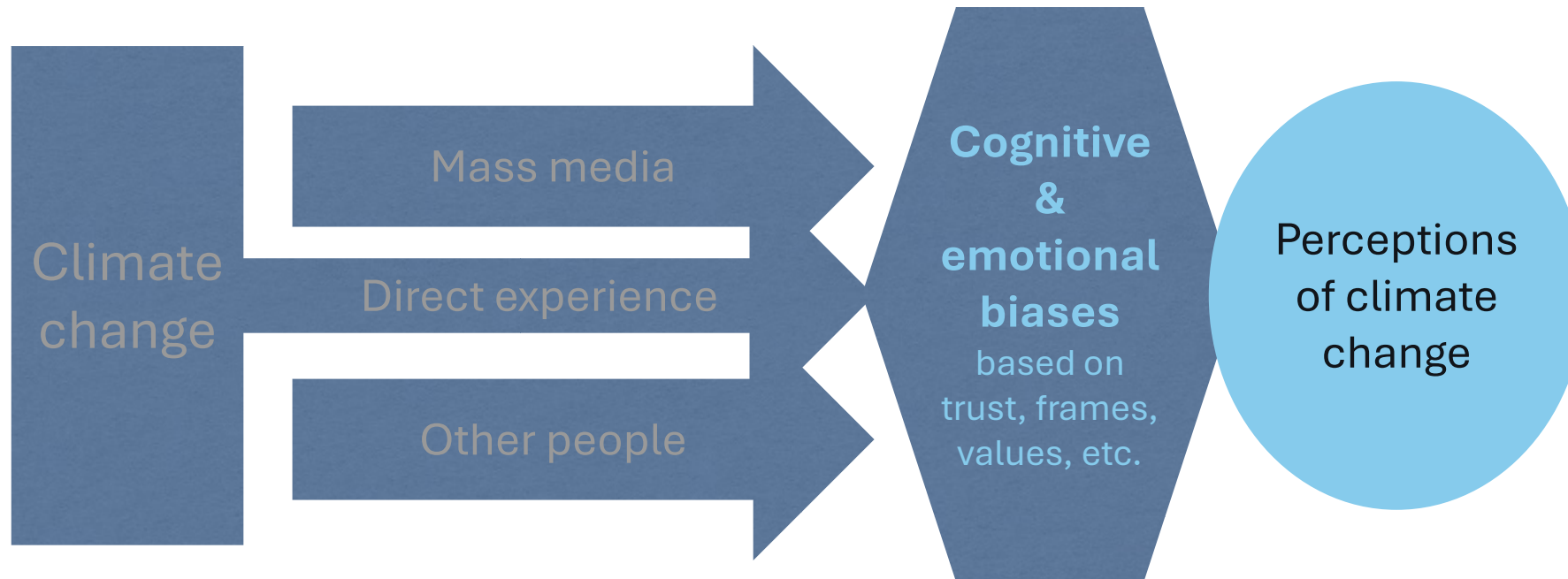
... or simply be ignored



Information is filtered through biases



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e.g. 'Confirmation bias':
select information that
affirms existing beliefs
and values

Does experiencing extreme weather matter?



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Risk of backlash in
communicating EEA (e.g.
Hai & Perlman, 2022)

>EEs as ‘**teachable
moments**’ for
deliberative and open
engagement focussed on
risk/action, not nec.
attribution (Ettinger et al.,
2023)

Best practice in climate
comms: tailored, value-
based, positive, build
efficacy, normalise
climate action

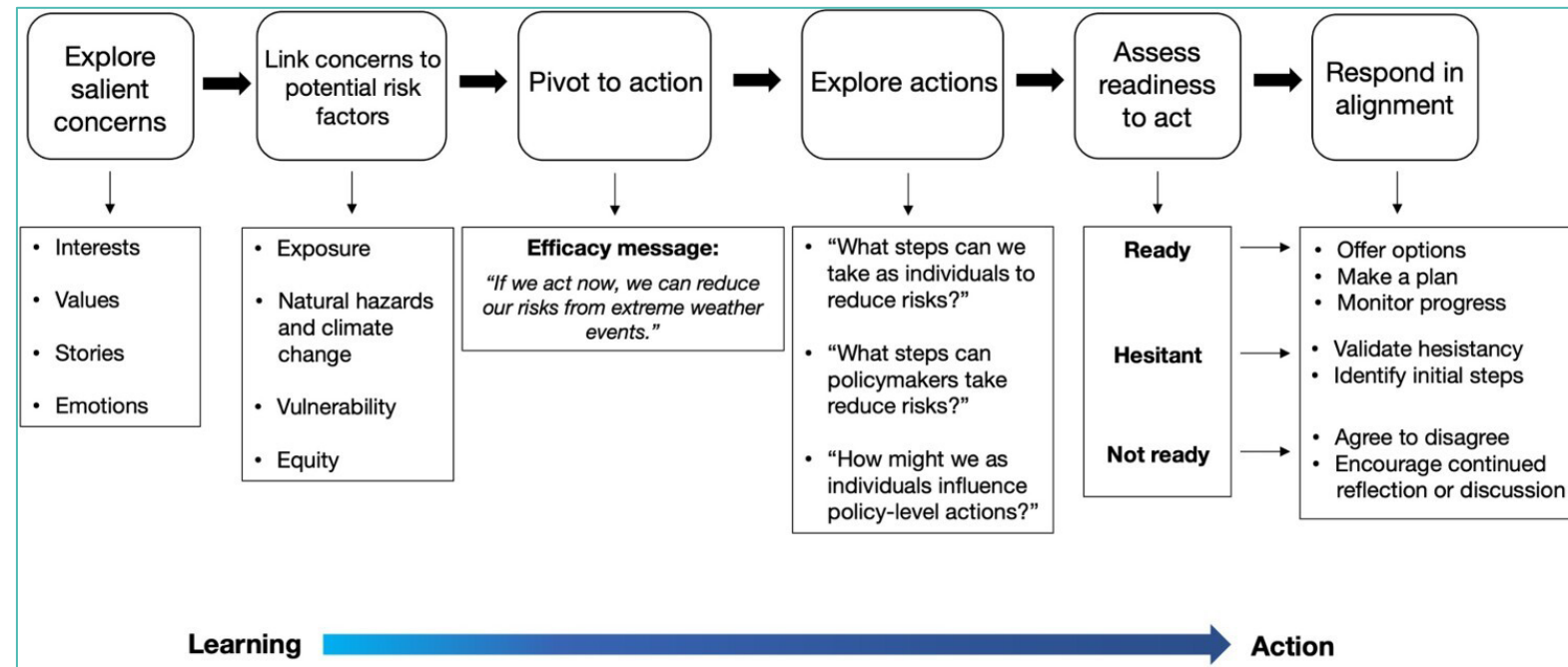
ENVIRONMENTAL COMMUNICATION
2023, VOL. 17, NO. 7, 828–843
<https://doi.org/10.1080/17524032.2023.2259623>

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

Extreme Weather Events as Teachable Moments: Catalyzing Climate Change Learning and Action Through Conversation

Joshua Ettinger ^a, Peter Walton ^b, James Painter ^c, Susan A. Flocke ^d and
Friederike E.L. Otto ^e



Conclusions



Rapid and wide-ranging behaviour change is essential for mitigating and adapting to climate change

Public support also vital for wider social change to address climate change, inc. policy support (IPCC, 2021)

Information provision is insufficient to change behaviour, but important for generating support for social change



Experiencing extreme events has relatively little impact on climate beliefs (albeit may narrow partisan gap)...

... but could be teachable moments to engage the public in tailored conversations about adaptation (and mitigation)



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